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PUTATIVE PERCEPTION OF ROTATING PERMANENT MAGNETIC FIELDS FOLLOWING INGESTION OF LSD[1]

M. A. PERSINGER

Laurentian University

Summary.—While sitting alone in complete darkness, 3 participants who had ingested psychotropic concentrations of lysergic acid diethylamide reported diffuse blobs of white, purplish, or greenish-yellow lights as two horseshoe magnets rotated at 0.5 Hz. The experiences were not reported when the magnets were stationary or removed from the apparatus. The estimated peak-to-peak variation in field strength at the distance of perception was between 50 and 500 nanoTesla. An association between these results and possible ergot-induced perceptions of "magnet light" reported during the last century by von Reichenbach (1851) is suggested.

During the years 1972 and 1973, 3 university students (2 women; 1 man: ages 21 to 25 years) who were casual users of lysergic acid diethylamide (LSD) volunteered for the experiment. About two hours earlier, each had consumed a "hit" of LSD from their own resources and within their own homes. The dosage was sufficient to abolish their normal baseline occurrence of occipital alpha rhythms with eyes closed for the subsequent two to three days as verified by direct electroencephalographic measurements. Each person sat alone in the dark within a windowless basement of a laboratory for about 10 min. A 0.5-Hz rotating magnetic field (Persinger, Lafreniere, & Ossenkopp, 1974) was initiated at a distance of about 2 to 3 m, intensity range 50 to 500 nanoT or 0.5 to 5 mG.

The field was created by two horseshoe magnets rotating in opposite directions such that they attracted and repelled once every cycle. The motor that turned the magnets was stopped intermittently and the magnets were randomly removed or attached by the experimenter without the subject's knowledge. There were four trials of 1 min. each for each of the two conditions (8 trials) presented in a random order. The experiment was completed in total darkness.

All three subjects reported either whitish or greenish-yellow and bright purple blobs of "diffuse light" that merged and separated as a "field" or "haze" around both magnets about once every 2 sec. The perceptions were reported only when the magnets were attached and rotating and were not reported when the magnets were stationary or when the motor was operat-

[1]Please send reprint requests to Dr. M. A. Persinger, Department of Psychology, Laurentian University, Ramsey Lake Road, Sudbury, Ontario, Canada P3E 2C6 or e-mail (mpersinger@admin.laurentian.ca).

ing after the magnets had been removed. The descriptions were quite distinct from phosphenes or the characteristics of magnetophosphenes (Valentinuzzi, 1961). When these subjects were exposed to the same rotating magnets at approximately the same distance one week after the ingestion of the drug, they reported no unusual visual perceptions. At that time their proportion of occipital alpha rhythms had returned to baseline levels.

An explanation for these reports has not been forthcoming and these types of experiments are no longer possible. Considering the structural similarity between LSD and ergotamine and the recent evidence that ergot contamination in grains from which breads were made before the twentieth century may have been more prevalent than suspected, the present results may help explain the frequent experiences reported by K. von Reichenbach in 1851 and translated by O'Byrne (1926) during the early nineteenth century of "sensitive" individuals in more remote areas of Germany who reliably perceived "glows" and iridescent lights around magnets when the armatures were removed. A physical basis for these experiences might also accommodate the moderate association between von Reichenbach's ordinal ratings of these subjects' perceptions as associated with different substances exposed to magnetic fields and their positions along the continuum of electronegativity in contemporary physical chemistry.

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